



#6

SEQUENCE LISTING

<110> Sleeman, Lorna
Sleeman, Matthew
Abernethy, Nevin
Onrust, Rene
Kumble, Anand
Murison, Greg

<120> Compositions Isolated From Stromal Cells
and Methods For Their Use

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<160> 61

<170> FastSEQ for Windows Version 4.0

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 <213> Mouse

<400> 12															
Met	Ala	Pro	Ala	Asn	Leu	Gly	Leu	Thr	Pro	His	Trp	Val	Met	Leu	Leu
1				5					10					15	
Gly	Ala	Val	Leu	Leu	Leu	Leu	Leu	Ser	Gly	Ala	Ser	Ala	Gln	Glu	Pro
			20					25					30		
Pro	Arg	Val	Gly	Cys	Ser	Glu	Tyr	Thr	Asn	Arg	Ser	Cys	Glu	Glu	Cys
		35					40					45			
Leu	Arg	Asn	Val	Ser	Cys	Leu	Trp	Cys	Asn	Glu	Asn	Lys	Ala	Cys	Met
		50				55					60				
Asp	Tyr	Pro	Val	Arg	Lys	Ile	Leu	Pro	Pro	Ala	Ser	Leu	Cys	Lys	Leu
65					70					75				80	
Ser	Ser	Ala	Arg	Trp	Gly	Val	Cys	Trp	Val	Asn	Phe	Glu	Ala	Leu	Ile
			85						90					95	
Ile	Thr	Met	Ser	Val	Leu	Gly	Gly	Ser	Val	Leu	Leu	Gly	Ile	Thr	Val
			100					105					110		
Cys	Cys	Cys	Tyr	Cys	Cys	Arg	Arg	Lys	Lys	Ser	Arg	Lys	Pro	Asp	Lys
		115					120					125			
Ser	Asp	Glu	Arg	Ala	Met	Arg	Glu	Gln	Glu	Glu	Arg	Val	Arg	Gln	
		130				135					140				
Glu	Glu	Arg	Arg	Ala	Glu	Met	Lys	Ser	Arg	His	Asp	Glu	Ile	Arg	Lys
145					150					155					160
Lys	Tyr	Gly	Leu	Phe	Lys	Glu	Gln	Asn	Pro	Tyr	Glu	Lys	Phe		
				165					170						

<210> 13

[illegible]

Ala	Pro	Gly	Lys	Pro	Cys	Arg	Gly	Leu	Ser	His	Arg	Thr	Cys	Ile	Leu
1				5					10					15	
Arg	Cys	Arg	Pro	Met	Pro	Leu	Phe	Thr	His	Pro	Ser	Pro	Cys	His	Leu
			20					25					30		
Cys	Gly	Pro	Cys	Ser	Thr	Thr	Ser	Pro	Ser	Thr	Trp	Val	Leu	Cys	Pro
			35				40					45			
Leu	Pro	Met	Ser	Pro	Leu	Cys	Pro	Thr	Cys	Val	Ser	Thr	Met	Thr	Leu
			50			55				60					
Ala	Thr	Cys	Thr	Cys	Pro	Trp	Ser	Thr	Thr	Cys	Pro	Cys	Thr	Leu	Ala
65				70					75					80	
Pro	Asn	His	Gly	Ile	Ala	Ser	Asp	Thr	Gln	Ser	Pro	Val	Ser	Arg	Ala
				85					90					95	
Glu	Ser	Val	Gly	Gly	Pro	Ser	Leu	Ile	Phe						
			100					105							

<400> 14

7

Pro Gln Gln Val Ser Ile Gln Phe Gln Val His Tyr Thr Thr Asn Thr
245 250 255
Asp Val Gln Phe Ile Ala Val Thr Gly Asp His Glu Ser Leu Gly Arg
260 265 270
Trp Asn Thr Tyr Ile Pro Leu His Tyr Cys Lys Asp Gly Leu Trp Ser
275 280 285
His Ser Val Phe Leu Pro Ala Asp Thr Val Val Glu Trp Lys Phe Val
290 295 300
Leu Val Glu Asn Lys Glu Val Thr Arg Trp Glu Glu Cys Ser Asn Arg
305 310 315 320
Phe Leu Gln Thr Gly His Glu Asp Lys Val Val His Gly Trp Trp Gly
325 330 335
Ile His

<210> 17
<211> 119
<212> PRT
<213> Mouse

<400> 17
Gly Thr Ser Pro Ala Ser Val Leu Arg Ser Val Ser Ser Asp Pro Ser
1 5 10 15
Leu Pro Pro Pro Ser Met Ala Ser Leu Leu Cys Cys Gly Pro Lys Leu
20 25 30
Ala Ala Cys Gly Ile Val Leu Ser Ala Trp Gly Val Ile Met Leu Ile
35 40 45
Met Leu Gly Ile Phe Phe Asn Val His Ser Ala Val Leu Ile Glu Asp
50 55 60
Val Pro Phe Thr Glu Lys Asp Phe Glu Asn Gly Pro Gln Asn Ile Tyr
65 70 75 80
Asn Leu Tyr Glu Gln Val Ser Tyr Asn Cys Phe Ile Ala Ala Gly Leu
85 90 95
Tyr Leu Leu Leu Gly Gly Phe Ser Phe Cys Gln Val Arg Leu Asn Lys
100 105 110
Arg Lys Glu Tyr Met Val Arg
115

<210> 18
<211> 280
<212> PRT
<213> Mouse

<400> 18
Met Val Pro Trp Phe Leu Leu Ser Leu Leu Leu Leu Ala Arg Pro Val
1 5 10 15
Pro Gly Val Ala Tyr Ser Val Ser Leu Pro Ala Ser Phe Leu Glu Asp
20 25 30
Val Ala Gly Ser Gly Glu Ala Glu Gly Ser Ser Ala Ser Pro Ser
35 40 45
Leu Pro Pro Pro Gly Thr Pro Ala Phe Ser Pro Thr Pro Glu Arg Pro
50 55 60
Gln Pro Thr Ala Leu Asp Gly Pro Val Pro Pro Thr Asn Leu Leu Glu
65 70 75 80
Gly Ile Met Asp Phe Phe Arg Gln Tyr Val Met Leu Ile Ala Val Val
85 90 95
Gly Ser Leu Thr Phe Leu Ile Met Phe Ile Val Cys Ala Ala Leu Ile

[illegible]

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<210> 19
<211> 188
<212> PRT
<213> Mouse
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<400> 19

Met	Ala	Leu	Cys	Ala	Arg	Ala	Ala	Leu	Leu	Gly	Val	Leu	Gln	Val	
1				5					10				15		
Leu	Ala	Leu	Leu	Gly	Ala	Ala	Gln	Asp	Pro	Thr	Asp	Ala	Gln	Gly	Ser
			20					25					30		
Ala	Ser	Gly	Asn	His	Ser	Val	Leu	Thr	Ser	Asn	Ile	Asn	Ile	Thr	Glu
		35					40					45			
Asn	Thr	Asn	Gln	Thr	Met	Ser	Val	Val	Ser	Asn	Gln	Thr	Ser	Glu	Met
	50					55					60				
Gln	Ser	Thr	Ala	Lys	Pro	Ser	Val	Leu	Pro	Lys	Thr	Thr	Thr	Leu	Ile
65					70					75				80	
Thr	Val	Lys	Pro	Ala	Thr	Ile	Val	Lys	Ile	Ser	Thr	Pro	Gly	Val	Leu
				85					90					95	
Pro	His	Val	Thr	Pro	Thr	Ala	Ser	Lys	Ser	Thr	Pro	Asn	Ala	Ser	Ala
			100					105					110		
Ser	Pro	Asn	Ser	Thr	His	Thr	Ser	Ala	Ser	Met	Thr	Thr	Pro	Ala	His
		115					120					125			
Ser	Ser	Leu	Leu	Thr	Thr	Val	Thr	Val	Ser	Ala	Thr	Thr	His	Pro	Thr
	130					135					140				
Lys	Gly	Lys	Gly	Ser	Lys	Phe	Asp	Ala	Gly	Ser	Phe	Val	Gly	Gly	Ile
145					150					155				160	
Gly	Val	Asn	Thr	Gly	Ser	Phe	Ile	Tyr	Ser	Leu	His	Trp	Met	Gln	Asn
				165					170					175	
Val	Leu	Phe	Lys	Lys	Arg	His	Ser	Val	Pro	Lys	His				
			180					185							

$\langle 210 \rangle$	20
$\langle 211 \rangle$	317

<212> PRT
<213> Mouse

<400> 20

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Met Arg Ser Gly Ala Leu Trp Pro Leu Leu Trp Gly Ala Leu Val Trp
 1           5           10           15
Thr Val Gly Ser Val Gly Ala Val Met Gly Ser Glu Asp Ser Val Pro
      20           25           30
Gly Gly Val Cys Trp Leu Gln Gln Gly Arg Glu Ala Thr Cys Ser Leu
      35           40           45
Val Leu Lys Thr Arg Val Ser Arg Glu Glu Cys Cys Ala Ser Gly Asn
      50           55           60
Ile Asn Thr Ala Trp Ser Asn Phe Thr His Pro Gly Asn Lys Ile Ser
      65           70           75           80
Leu Leu Gly Phe Leu Gly Leu Val His Cys Leu Pro Cys Lys Asp Ser
      85           90           95
Cys Asp Gly Val Glu Cys Gly Pro Gly Lys Ala Cys Arg Asn Ala Gly
      100          105          110
Gly Ala Ser Asn Asn Cys Glu Cys Val Pro Asn Cys Glu Gly Phe Pro
      115          120          125
Ala Gly Phe Gln Val Cys Gly Ser Asp Gly Ala Thr Tyr Arg Asp Glu
      130          135          140
Cys Glu Leu Arg Thr Ala Arg Cys Arg Gly His Pro Asp Leu Arg Val
      145          150          155          160
Met Tyr Arg Gly Arg Cys Gln Lys Ser Cys Ala Gln Val Val Cys Pro
      165          170          175
Arg Pro Gln Ser Cys Leu Val Asp Gln Thr Gly Ser Ala His Cys Val
      180          185          190
Val Cys Arg Ala Ala Pro Cys Pro Val Pro Ser Asn Pro Gly Gln Glu
      195          200          205
Leu Cys Gly Asn Asn Asn Val Thr Tyr Ile Ser Ser Cys His Leu Arg
      210          215          220
Gln Ala Thr Cys Phe Leu Gly Arg Ser Ile Gly Val Arg His Pro Gly
      225          230          235          240
Ile Cys Thr Gly Gly Pro Lys Phe Leu Lys Ser Gly Asp Ala Ala Ile
      245          250          255
Val Asp Met Val Pro Gly Lys Pro Met Cys Val Glu Ser Phe Ser Asp
      260          265          270
Tyr Pro Pro Leu Gly Arg Phe Ala Val Arg Asp Met Arg Gln Thr Val
      275          280          285
Ala Val Gly Val Ile Lys Ala Val Asp Lys Lys Ala Ala Gly Ala Gly
      290          295          300
Lys Val Thr Lys Ser Ala Gln Lys Ala Gln Lys Ala Lys
      305          310          315

```

<210> 21
<211> 384
<212> DNA
<213> Mouse

<220>

<221> misc_feature

<222> (1) ... (384)

<223> n = A,T,C or G

<400> 21

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60

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tgtgggtggc	cagaagtttg	tgggtgttgc	cacgggtgat	gtgtggtcac	ggcctgatgg	180
ctcctacctc	aacaagctgc	tcatctctcg	ggcccgcag	gatgatgctg	gcatgtacat	240
ctgcctaggt	gcaaatacca	tgggctacag	tttccgtagc	gccttcctca	ctgtattacc	300
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gcctgtggng	atcggcatcc	cagc				384

<210> 22
 <211> 1967
 <212> DNA
 <213> Mouse

<400> 22						
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ctgagccctg	agtggcgctc	agtccagctc	ccagtgaccg	cgcccctgct	tcaggtccga	180
ccggcgagat	gacgcggagc	cccgcgctgc	tgctgctgct	attggggggc	ctcccgctcg	240
ctgaggcggc	gegaggaccc	ccaagaatgg	cagacaaagt	ggccccacgg	caggtggccc	300
gcctggggcg	cactgtgcgg	ctacagtggc	cagtggaggg	ggaccaccca	ccgttgacca	360
tgtggaccaa	agatggccgc	acaatccaca	gtggctggag	ccgcttcctg	gtgctgcgcc	420
agggctctgaa	ggtgaaggag	gtggaggccg	aggatgccgg	tgtttatgtg	tgcaaggcca	480
ccaatggctt	tggcagcctc	agcgtcaact	acactctcat	catcatggat	gatattagtc	540
cagggaaagga	gagccctggg	ccaggtgggt	cttcgggggg	ccaggaggac	ccagccagcc	600
agcagtgggc	acggcctcgc	ttcacacagc	cctccaagat	gaggcgccga	gtgattgcac	660
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agaagtggac	actgagcttg	aagaacctga	agcctgaaga	cagtggcaag	tacacgtgcc	840
gtgtatctaa	caaggccggg	gccatcaacg	ccacctacaa	agtggatgta	atccagcggg	900
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ttggggagaat	tgagaacaat	ggaggaagag	tatcttaggg	tgccttatgg	tggacactca	1800
caaacttggc	catatagatg	tatgtactac	cagatgaaca	gccagccaga	ttcacacacg	1860
cacatgttta	aacgtgtaaa	cgtgtgcaca	actgcacaca	caacctgaga	aaccttcagg	1920
aggatttggg	gtgtgacttt	gcagtgcac	gtagcgatgg	ctagttg		1967

<210> 23
 <211> 1742
 <212> DNA
 <213> Mouse

<400> 23						
gcgcggcgcc	cggggcccct	cgccccgcgc	ccccctcttc	cgccctcgc	caagcctcgc	60
cgtttatccg	cgcgacagc	gcgccccgcg	ccccagcccc	gccttagccg	ccagcgcccc	120
ggtagcgccg	ccccgcccag	gccggggccc	ggggcgccgg	gggcgggatg	cggcgcccgg	180
ggcagcgatg	accgcgtcgc	gctgctcagg	ggccccgctc	tgaccccgct	gcctgctgcg	240

cgccccgcg	ctgatccctg	tcgagcgctc	acgcgcctcg	cttcctttgc	ctggagctcg	300
gcgccgagc	gggcccggacc	ctggctctgc	ggccgcgacc	tgggtcttgc	gggcctgagc	360
cctgagtggc	gtccagtgca	gctcccagtg	accgcgcccc	tgtctcaggt	ccgaccggcg	420
agatgacgcg	gagccccgcg	ctgctgctgc	tgctattggg	ggccctcccc	tcggctgagg	480
cggcgcgaga	tgatattagt	ccagggaagg	agagccctgg	gccaggtggt	tcttcggggg	540
gccaggagga	ccaagccagc	cagcagtggg	cacggcctcg	cttcacacag	ccctccaaga	600
tgaggcgccg	agtgattgca	cggcctgtgg	gtagctctgt	gcggctcaag	tgtgtggcca	660
gtgggcaccc	acggccagac	atcatgtgga	tgaaggatga	ccagacctg	acgcatctag	720
aggctagtga	acacagaaa	aagaagtgga	cactgagctt	gaagaacctg	aagcctgaag	780
acagtggcaa	gtacacgtgc	cgtgtatcta	acaaggccgg	tgccatcaac	gccacctaca	840
aagtggatgt	aatccagcgg	actcgttcca	agcctgtgct	cacagggaca	cacctctgtga	900
acacaacggt	ggacttcggt	gggacaacct	ccttcagtg	caagggtcgc	agtgcgtgga	960
agcctgtgat	ccagtggtcg	aa'gcgggtgg	agtacggctc	cgagggcagc	cacaactcca	1020
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ctgatggctc	ctacctcaac	aagctgctca	tctctcgggc	ccgccaggat	gatgctggca	1140
tgtacatctg	cctaggtgca	aataccatgg	gctacagttt	ccgtagcgcc	ttctctactg	1200
tattaccaga	ccccaaacct	cctccagggc	ctcctatggc	ttcttcacgc	tcattccaaa	1260
gcctgccatg	gcctgtggtg	atcggcatcc	cagctgggtg	tgtcttcac	ctaggcatg	1320
tgctgctctg	gctttgccag	accaagaaga	agccatgtgc	cccagcatct	acacttcctg	1380
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cctctggctc	aactgctggc	cccaagctgt	accccaagct	atacacagat	gtgcacacac	1560
acacacatac	acacacctgc	actcacacgc	tctcatgtgg	agggcaaggt	tcatcaacac	1620
cagcatgtcc	actatcagtg	ctaaatacag	cgaatctcca	agcactgtgt	cctgaggtag	1680
gcatatgggg	gccaaaggcaa	caggttggga	gaattgagaa	caatggagga	agagtatctt	1740
aq						1742

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<210> 24
<211> 1004
<212> DNA
<213> Human
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<400> 24						
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agatggcgga	caagggtggtc	ccacggcagg	tggccggctg	ggccgcactg	tgcggctgca	180
gtgccagtgg	aggggggacc	gccgccgctg	accatgtgga	ccaaggatgg	ccgcaccatc	240
cacagcggct	ggagccgctt	ccgcgtgctg	ccgcaggggc	tgaagtgtaa	gcaggtggag	300
cgggaggatg	ccggcgtgta	cgtgtgcaag	gccaccaacg	gcttcggcag	ccttagcgtc	360
aactacaccc	tcgtcgtgct	ggatgacatt	agcccaggga	aggagagcct	ggggcccgac	420
agctcctctg	gggggtcaaga	ggaccccgcc	agccagcagt	gggcacgacc	gcgcttcaca	480
cagccctcca	agatgaggcg	ccgggtgatc	gcacggcccc	tgggtagctc	cgtgcggctc	540
aagtgcgtgg	ccagcgggca	ccctcggccc	gacatcacgt	ggatgaagga	cgaccaggcc	600
ttgacgcgcc	cagaggccgc	tgagcccagg	aagaagaagt	ggacactgag	cctgaagaac	660
ctgcggccgg	aggacagcgg	caaatacacc	tgccgcgtgt	cgaaccgcgc	gggcgccatc	720
aacgccacct	acaagggtgga	tgtgatccag	cggacccggt	ccaagcccg	gctcacaggc	780
acgcaccgcg	tgaacacgac	ggtggacttc	ggggggacca	cgtccttcca	gtgcaaggtg	840
cgcacccagc	tgaagccggt	gatccagtgg	ctgaagcgcg	tggagtacgg	cgccgagggc	900
gccacaacct	ccaccatcga	tgtgggcggc	cagaagtttg	tgggtctgcc	cacgggtgac	960
gtgtgtgtgc	ggcccgacgc	ctcctacctc	aataagccgc	tccc		1004

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<210> 25
<211> 478
<212> DNA
<213> Mouse
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<400> 25

[illegible]

<400> 26

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<210> 27
<211> 2213
<212> DNA
<213> Mouse '
```

<400> 27

14

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aaactgcccc	aggaacacgg	tcaagggcaa	aggcctgagt	gttctcctca	gccacgcgaa	1680
agccccgttc	ttccgaggag	accaggagaa	ggatccattg	ctccaggaca	agccaaggac	1740
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cgtggccttag	ggagtgtggg	taaatagcat	tttagagaag	acatgggaag	acttagtggt	1920
tcttccccatc	tgtattgtgg	tttttacact	gttcgtgggg	tggacacgct	gtgtctgaag	1980
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ctcagctttc	cacataacat	gggcatgaac	ccagctaatc	accacctgaa	ggccatgctt	2100
catctgcctt	ccaactcact	gagcatgcct	gagctcctga	caaaattata	atgggcccg	2160
gctttgtgta	tggcgctgt	gtgtacatat	tctactcatt	aaaaaggtag	tct	2213

<210> 28
 <211> 412
 <212> DNA
 <213> Mouse

<400> 28	
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accccggaacc	aggaagcacc
cctcggtcgg	acgggtttcat
tacaaggcct	acgccaagaa
aagagtctca	acaaggcgtc
attcggcacc	cccatatcgt
ctcatcatgg	agttctgtgc
ccccagctt	ctctgctggc
cgcgggatgg	ctgggcccag
cgctggggca	gtggcacgta
gaagtggtag	ccataaaaatg
ctcctgactg	agattgagat
gacttcaggt	gggacaatga
ctgtctcgct	tcattcatac
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cgtggccaag	
cctcaagggc	
caatatctac	
cc	

<210> 29
 <211> 437
 <212> DNA
 <213> Mouse

<400> 29	
cacagtcttg	tttctgggtg
ttgccccaaa	gaatttgaaa
aattttgtgtt	gatcaatgct
caatagctgt	ggtcatgtct
agatggattc	aatcttcata
tcacagagcc	tgtgcttggc
tctatattgt	ggtgacaatg
tcaaaaaaaa	aaaaaaa
ctttgatcac	tgtggggatg
aacctggagc	ttgtcccaag
caggagatgg	atcctgcctt
gcaaaaactcc	tgtcttttaa
aacatgaatg	atggcttgaca
atggccagcc	ccagaagatt
ccctagaatt	gcattcttgg
ccctaatatg	tctgtgtcca
aaataaacta	cccttagcat

<210> 30
 <211> 126
 <212> PRT
 <213> Mouse

<220>
 <221> VARIANT
 <222> (1) ... (126)
 <223> Xaa = Any Amino Acid

<400> 30	
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Val Lys Pro Val Ile Gln Trp Leu Lys Arg Val Glu Tyr Gly Ser Glu	
20 25 30	

Gly	Arg	His	Asn	Ser	Thr	Ile	Asp	Val	Gly	Gly	Gln	Lys	Phe	Val	Val
		35					40					45			
Leu	Pro	Thr	Gly	Asp	Val	Trp	Ser	Arg	Pro	Asp	Gly	Ser	Tyr	Leu	Asn
	50					55					60				
Lys	Leu	Leu	Ile	Ser	Arg	Ala	Arg	Gln	Asp	Asp	Ala	Gly	Met	Tyr	Ile
65					70					75					80
Cys	Leu	Gly	Ala	Asn	Thr	Met	Gly	Tyr	Ser	Phe	Arg	Ser	Ala	Phe	Leu
				85					90					95	
Thr	Val	Leu	Pro	Asp	Pro	Lys	Pro	Pro	Gly	Pro	Pro	Met	Ala	Ser	Ser
			100					105					110		
Ser	Ser	Ser	Thr	Ser	Leu	Pro	Trp	Pro	Val	Xaa	Gly	Ile	Pro		
		115					120					125			

<210> 31
 <211> 529
 <212> PRT
 <213> Mouse

<400> 31

Met	Thr	Arg	Ser	Pro	Ala	Leu	Leu	Leu	Leu	Leu	Leu	Gly	Ala	Leu	Pro
1				5					10					15	
Ser	Ala	Glu	Ala	Ala	Arg	Gly	Pro	Pro	Arg	Met	Ala	Asp	Lys	Val	Val
			20					25					30		
Pro	Arg	Gln	Val	Ala	Arg	Leu	Gly	Arg	Thr	Val	Arg	Leu	Gln	Cys	Pro
		35					40						45		
Val	Glu	Gly	Asp	Pro	Pro	Pro	Leu	Thr	Met	Trp	Thr	Lys	Asp	Gly	Arg
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Thr	Ile	His	Ser	Gly	Trp	Ser	Arg	Phe	Arg	Val	Leu	Pro	Gln	Gly	Leu
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Lys	Val	Lys	Glu	Val	Glu	Ala	Glu	Asp	Ala	Gly	Val	Tyr	Val	Cys	Lys
				85				90						95	
Ala	Thr	Asn	Gly	Phe	Gly	Ser	Leu	Ser	Val	Asn	Tyr	Thr	Leu	Ile	Ile
			100					105					110		
Met	Asp	Asp	Ile	Ser	Pro	Gly	Lys	Glu	Ser	Pro	Gly	Pro	Gly	Gly	Ser
		115					120					125			
Ser	Gly	Gly	Gln	Glu	Asp	Pro	Ala	Ser	Gln	Gln	Trp	Ala	Arg	Pro	Arg
	130					135					140				
Phe	Thr	Gln	Pro	Ser	Lys	Met	Arg	Arg	Arg	Val	Ile	Ala	Arg	Pro	Val
145					150					155					160
Gly	Ser	Ser	Val	Arg	Leu	Lys	Cys	Val	Ala	Ser	Gly	His	Pro	Arg	Pro
				165					170					175	
Asp	Ile	Met	Trp	Met	Lys	Asp	Asp	Gln	Thr	Leu	Thr	His	Leu	Glu	Ala
			180					185					190		
Ser	Glu	His	Arg	Lys	Lys	Lys	Trp	Thr	Leu	Ser	Leu	Lys	Asn	Leu	Lys
		195					200					205			
Pro	Glu	Asp	Ser	Gly	Lys	Tyr	Thr	Cys	Arg	Val	Ser	Asn	Lys	Ala	Gly
	210					215					220				
Ala	Ile	Asn	Ala	Thr	Tyr	Lys	Val	Asp	Val	Ile	Gln	Arg	Thr	Arg	Ser
225					230					235					240
Lys	Pro	Val	Leu	Thr	Gly	Thr	His	Pro	Val	Asn	Thr	Thr	Val	Asp	Phe
				245					250					255	
Gly	Gly	Thr	Thr	Ser	Phe	Gln	Cys	Lys	Val	Arg	Ser	Asp	Val	Lys	Pro
			260					265					270		
Val	Ile	Gln	Trp	Leu	Lys	Arg	Val	Glu	Tyr	Gly	Ser	Glu	Gly	Arg	His
		275					280					285			
Asn	Ser	Thr	Ile	Asp	Val	Gly	Gly	Gln	Lys	Phe	Val	Val	Leu	Pro	Thr
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09823033.071201

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Ser Glu Gly Arg His Asn Ser Thr Ile Asp Val Gly Gly Gln Lys Phe
      195      200      205
Val Val Leu Pro Thr Gly Asp Val Trp Ser Arg Pro Asp Gly Ser Tyr
      210      215      220
Leu Asn Lys Leu Leu Ile Ser Arg Ala Arg Gln Asp Asp Ala Gly Met
      225      230      235
Tyr Ile Cys Leu Gly Ala Asn Thr Met Gly Tyr Ser Phe Arg Ser Ala
      245      250      255
Phe Leu Thr Val Leu Pro Asp Pro Lys Pro Pro Pro Gly Pro Pro Met
      260      265      270
Ala Ser Ser Ser Ser Ser Thr Ser Leu Pro Trp Pro Val Val Ile Gly
      275      280      285
Ile Pro Ala Gly Ala Val Phe Ile Leu Gly Thr Val Leu Leu Trp Leu
      290      295      300
Cys Gln Thr Lys Lys Lys Pro Cys Ala Pro Ala Ser Thr Leu Pro Val
      305      310      315
Pro Gly His Arg Pro Pro Gly Thr Ser Arg Glu Arg Ser Gly Asp Lys
      325      330      335
Asp Leu Pro Ser Leu Ala Val Gly Ile Cys Glu Glu His Gly Ser Ala
      340      345      350
Met Ala Pro Gln His Ile Leu Ala Ser Gly Ser Thr Ala Gly Pro Lys
      355      360      365
Leu Tyr Pro Lys Leu Tyr Thr Asp Val His Thr His Thr His Thr His
      370      375      380
Thr Cys Thr His Thr Leu Ser Cys Gly Gly Gln Gly Ser Ser Thr Pro
      385      390      395
Ala Cys Pro Leu Ser Val Leu Asn Thr Ala Asn Leu Gln Ala Leu Cys
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Pro Glu Val Gly Ile Trp Gly Pro Arg Gln Gln Val Gly Arg Ile Glu
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Asn Asn Gly Gly Arg Val Ser
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 <211> 322
 <212> PRT
 <213> Human

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  35      40      45
Val Pro Val Glu Gly Asp Pro Pro Leu Thr Met Trp Thr Lys Asp
  50      55      60
Gly Arg Thr Ile His Ser Gly Trp Ser Arg Phe Arg Val Leu Pro Gln
  65      70      75      80
Gly Leu Lys Val Lys Gln Val Glu Arg Glu Asp Ala Gly Val Tyr Val
  85      90      95
Cys Lys Ala Thr Asn Gly Phe Gly Ser Leu Ser Val Asn Tyr Thr Leu
  100      105      110

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Gln	Val	Ala	Leu	Glu	Glu	Phe	His	Lys	His	Pro	Pro	Val	Gln	Leu	Ala	
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Phe	Gln	Glu	Ile	Gly	Val	Asp	Arg	Ala	Glu	Glu	Val	Leu	Phe	Ser	Ala	
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Lys	Lys	Asp	Trp	Lys	Pro	Glu	Cys	Thr	Ile	Lys	Pro	Asn	Gly	Arg		
			85					90					95			
Arg	Arg	Lys	Cys	Leu	Ala	Cys	Ile	Lys	Met	Asp	Pro	Lys	Gly	Lys	Ile	
			100					105					110			
Leu	Gly	Arg	Ile	Val	His	Cys	Pro	Ile	Leu	Lys	Gln	Gly	Pro	Gln	Asp	
		115					120					125				
Pro	Gln	Glu	Leu	Gln	Cys	Ile	Lys	Ile	Ala	Gln	Ala	Gly	Glu	Asp	Pro	
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His	Gly	Tyr														
145																

<210> 36

<211> 574

<212> PRT

<213> Mouse

<400> 36

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		20						25				30				
Gln	Tyr	Pro	Asn	His	Met	Arg	Glu	His	Asn	Gln	Leu	Arg	Gly	Trp	Ser	
	35						40					45				
Ser	Asp	Glu	Asn	Glu	Trp	Asp	Glu	His	Leu	Tyr	Pro	Val	Trp	Arg	Arg	
	50					55					60					
Gly	Asp	Gly	Arg	Trp	Lys	Asp	Ser	Trp	Glu	Gly	Gly	Arg	Val	Gln	Ala	
65				70					75					80		
Val	Leu	Thr	Ser	Asp	Ser	Pro	Ala	Leu	Val	Gly	Ser	Asn	Ile	Thr	Phe	
			85						90				95			
Val	Val	Asn	Leu	Val	Phe	Pro	Arg	Cys	Gln	Lys	Glu	Asp	Ala	Asn	Gly	
		100						105					110			
Asn	Ile	Val	Tyr	Glu	Lys	Asn	Cys	Arg	Asn	Asp	Leu	Gly	Leu	Thr	Ser	
	115					120						125				
Asp	Leu	His	Val	Tyr	Asn	Trp	Thr	Ala	Gly	Ala	Asp	Asp	Gly	Asp	Trp	
	130					135					140					
Glu	Asp	Gly	Thr	Ser	Arg	Ser	Gln	His	Leu	Arg	Phe	Pro	Asp	Arg	Arg	
145				150					155					160		
Pro	Phe	Pro	Arg	Pro	His	Gly	Trp	Lys	Lys	Trp	Ser	Phe	Val	Tyr	Val	
			165					170					175			
Phe	His	Thr	Leu	Gly	Gln	Tyr	Phe	Gln	Lys	Leu	Gly	Arg	Cys	Ser	Ala	
		180						185					190			
Arg	Val	Ser	Ile	Asn	Thr	Val	Asn	Leu	Thr	Ala	Gly	Pro	Gln	Val	Met	
		195					200					205				
Glu	Val	Thr	Val	Phe	Arg	Arg	Tyr	Gly	Arg	Ala	Tyr	Ile	Pro	Ile	Ser	
	210					215					220					
Lys	Val	Lys	Asp	Val	Tyr	Val	Ile	Thr	Asp	Gln	Ile	Pro	Val	Phe	Val	
225				230						235				240		
Thr	Met	Ser	Gln	Lys	Asn	Asp	Arg	Asn	Leu	Ser	Asp	Glu	Ile	Phe	Leu	

Arg	Asp	Leu	Pro	Ile	Val	Phe	Asp	Val	Leu	Ile	His	Asp	Pro	Ser	His
			260						265				270		
Phe	Leu	Asn	Asp	Ser	Ala	Ile	Ser	Tyr	Lys	Trp	Asn	Phe	Gly	Asp	Asn
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Thr	Gly	Leu	Phe	Val	Ser	Asn	Asn	His	Thr	Leu	Asn	His	Thr	Tyr	Val
	290					295					300				
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305					310					315					320
Gly	Pro	Cys	Pro	Pro	Pro	Ser	Pro	Ser	Thr	Pro	Pro	Pro	Pro	Ser	Thr
				325					330					335	
Pro	Pro	Ser	Pro	Pro	Pro	Ser	Pro	Leu	Pro	Thr	Leu	Ser	Thr	Pro	Ser
			340					345					350		
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		355					360					365			
Ser	Asn	Glu	Asn	Cys	Arg	Ile	Asn	Arg	Tyr	Gly	Tyr	Phe	Arg	Ala	Thr
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Ile	Thr	Ile	Val	Glu	Gly	Ile	Leu	Glu	Val	Ser	Ile	Met	Gln	Ile	Ala
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Asp	Val	Pro	Met	Pro	Thr	Pro	Gln	Pro	Ala	Asn	Ser	Leu	Met	Asp	Phe
				405					410					415	
Thr	Val	Thr	Cys	Lys	Gly	Ala	Thr	Pro	Met	Glu	Ala	Cys	Thr	Ile	Ile
			420					425					430		
Ser	Asp	Pro	Thr	Cys	Gln	Ile	Ala	Gln	Asn	Arg	Val	Cys	Ser	Pro	Val
		435					440					445			
Ala	Val	Asp	Gly	Leu	Cys	Leu	Leu	Ser	Val	Arg	Arg	Ala	Phe	Asn	Gly
	450					455					460				
Ser	Gly	Thr	Tyr	Cys	Val	Asn	Phe	Thr	Leu	Gly	Asp	Asp	Ala	Ser	Leu
465					470					475					480
Ala	Leu	Thr	Ser	Thr	Leu	Ile	Ser	Ile	Pro	Gly	Lys	Asp	Pro	Asp	Ser
				485					490					495	
Pro	Leu	Arg	Ala	Val	Asn	Gly	Val	Leu	Ile	Ser	Ile	Gly	Cys	Leu	Ala
			500					505					510		
Val	Leu	Val	Thr	Met	Val	Thr	Ile	Leu	Leu	Tyr	Lys	Lys	His	Lys	Ala
		515					520					525			
Tyr	Lys	Pro	Ile	Gly	Asn	Cys	Pro	Arg	Asn	Thr	Val	Lys	Gly	Lys	Gly
	530					535					540				
Leu	Ser	Val	Leu	Leu	Ser	His	Ala	Lys	Ala	Pro	Phe	Phe	Arg	Gly	Asp
545					550					555					560
Gln	Glu	Lys	Asp	Pro	Leu	Leu	Gln	Asp	Lys	Pro	Arg	Thr	Leu		
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<210> 37
 <211> 137
 <212> PRT
 <213> Mouse

<400> 37

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			20					25				30			
Met	Ala	Gly	Pro	Ser	Trp	Gly	Leu	Pro	Arg	Leu	Asp	Gly	Phe	Ile	Leu
		35					40					45			
Thr	Glu	Arg	Leu	Gly	Ser	Gly	Thr	Tyr	Ala	Thr	Val	Tyr	Lys	Ala	Tyr
	50					55					60				
Ala	Lys	Lys	Asp	Thr	Arg	Glu	Val	Val	Ala	Ile	Lys	Cys	Val	Ala	Lys

65					70					75				80	
Lys	Ser	Leu	Asn	Lys	Ala	Ser	Val	Glu	Asn	Leu	Leu	Thr	Glu	Ile	Glu
				85					90					95	
Ile	Leu	Lys	Gly	Ile	Arg	His	Pro	His	Ile	Val	Gln	Leu	Lys	Asp	Phe
			100					105					110		
Gln	Trp	Asp	Asn	Asp	Asn	Ile	Tyr	Leu	Ile	Met	Glu	Phe	Cys	Ala	Gly
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Gly	Asp	Leu	Ser	Arg	Phe	Ile	His	Thr							
	130					135									

<210> 38
 <211> 72
 <212> PRT
 <213> Mouse

<400> 38															
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			20					25					30		
Lys	Pro	Ser	Pro	Glu	Ser	Val	Gly	Ile	Cys	Val	Asp	Gln	Cys	Ser	Gly
		35					40					45			
Asp	Gly	Ser	Cys	Pro	Gly	Asn	Met	Lys	Cys	Cys	Ser	Asn	Ser	Cys	Gly
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His	Val	Cys	Lys	Thr	Pro	Val	Phe								
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<210> 39
 <211> 1587
 <212> DNA
 <213> Mouse

<400> 39															
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<400> 41

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<210> 42

<211> 1008

<212> DNA

<213> Mouse

<400> 42

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ccagcgtgtg	gtgagcacac	acgggtgtgtg	gctgctggcc	ttcctgaaga	agcggaatgg	300
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caggaatcaa	gagacctcct	tcccacccac	ctccattctt	ctctctctgg	cctgcgttct	600
cctgagcaag	tttcttgtag	ccagcatcct	ctgggctgtg	gccaggggca	ggcagaagcc	660
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<210> 43

<211> 1871

<212> DNA
<213> Mouse

<400> 43

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gacagtggca	caatgacatc	taagaattat	ccagggaactt	accccaatta	caactgtgtgt	240
gaaaagatca	tcacagtccc	aaaggggaag	agacttattc	tgaggttggg	agatttgaac	300
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<210> 44
<211> 3767
<212> DNA
<213> Mouse

<400> 44

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<210> 45

<211> 925

<212> DNA

<213> Mouse

<400> 45

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<210> 46
<211> 1423
<212> DNA
<213> Mouse
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<400>	46							
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<210> 47
<211> 464
<212> PRT
<213> Mouse
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<400> 47
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Glu	Cys	Glu	Gln	Ala	Glu	Arg	Leu	Gly	Ala	Val	Asp	Glu	Ser	Leu	Ser		
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His	Leu	Ser	Ala	Arg	Tyr	Leu	Leu	Gln	Asp	Thr	Trp	Leu	Glu	Lys	Lys		
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Trp	Gly	His	Asn	Val	Thr	Glu	Phe	Gln	Gln	Arg	Phe	Asp	Gly	Ile	Leu		
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Thr	Glu	Gly	Glu	Gly	Pro	Arg	Arg	Leu	Arg	Asn	Leu	Tyr	Phe	Leu	Tyr		
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Pro	Asp	Phe	Gln	Leu	Phe	Thr	Gly	Asn	Lys	Val	Gln	Asp	Ala	Glu	Asn		
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Lys	Ala	Leu	Leu	Leu	Glu	Ile	Leu	His	Glu	Ile	Lys	Ser	Phe	Pro	Leu		
			340					345					350				
His	Phe	Asp	Glu	Asn	Ser	Phe	Phe	Ala	Gly	Asp	Lys	Asn	Glu	Ala	His		
		355					360					365					
Lys	Leu	Lys	Glu	Asp	Phe	Arg	Leu	His	Phe	Arg	Asn	Ile	Ser	Arg	Ile		
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Thr	Gln	Gly	Leu	Gly	Thr	Ala	Leu	Lys	Ile	Leu	Phe	Ser	Glu	Lys	Leu		
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Arg	Gln	Glu	Ile	Val	Ser	Leu	Phe	Asn	Ala	Phe	Gly	Arg	Ile	Ser	Thr		
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<210> 48

<211> 664

<212> PRT
<213> Mouse

<400> 48

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Lys	Phe	Leu	Val	Val	Trp	Ala	Leu	Val	Leu	Leu	Ala	Asp	Phe	Val	Leu
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Glu	Phe	Arg	Phe	Glu	Tyr	Leu	Trp	Pro	Phe	Trp	Leu	Phe	Ile	Arg	Ser
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Val	Tyr	Asp	Ser	Phe	Arg	Tyr	Gln	Gly	Leu	Ala	Phe	Ser	Val	Phe	Phe
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Val	Cys	Val	Ala	Phe	Thr	Ser	Asn	Ile	Ile	Cys	Leu	Leu	Phe	Ile	Pro
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Ile	Gln	Trp	Leu	Phe	Phe	Ala	Ala	Ser	Thr	Tyr	Val	Trp	Val	Gln	Tyr
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Val	Trp	His	Thr	Glu	Arg	Gly	Val	Cys	Leu	Pro	Thr	Val	Ser	Leu	Trp
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Ile	Leu	Phe	Val	Tyr	Ile	Glu	Ala	Ala	Ile	Arg	Phe	Lys	Asp	Leu	Lys
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Asn	Phe	His	Val	Asp	Leu	Cys	Arg	Pro	Phe	Ala	Ala	His	Cys	Ile	Gly
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Tyr	Pro	Val	Val	Thr	Leu	Gly	Phe	Gly	Phe	Lys	Ser	Tyr	Val	Ser	Tyr
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Lys	Met	Arg	Leu	Arg	Lys	Gln	Lys	Glu	Val	Gln	Lys	Glu	Asn	Glu	Phe
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Tyr	Met	Gln	Leu	Leu	Gln	Gln	Ala	Leu	Pro	Pro	Glu	Gln	Gln	Met	Leu
		195					200					205			
Gln	Lys	Gln	Glu	Lys	Glu	Ala	Glu	Glu	Ala	Ala	Lys	Gly	Leu	Pro	Asp
		210				215					220				
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Lys	Lys	Leu	Ser	Thr	Thr	Leu	Pro	Glu	Ile	Glu	Tyr	Arg	Glu	Lys	Gly
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Lys	Glu	Lys	Asp	Lys	Asp	Ala	Lys	Lys	His	Asn	Leu	Gly	Ile	Asn	Asn
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Asn	Asn	Ile	Leu	Gln	Pro	Val	Asp	Ser	Lys	Ile	Gln	Glu	Ile	Glu	Tyr
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Lys	Gln	Lys	Cys	Thr	Ser	Lys	Gly	Pro	Ser	Ala	His	Lys	Asp	Leu	Met
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Arg	Gln	Val	Glu	Gln	Glu	Leu	Arg	Ser	Gln	Ile	Ser	Ala	Leu	Ser	Ser
				405					410					415	
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[illegible]

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<210> 49
<211> 199
<212> PRT
<213> Mouse
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<400> 49

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Asn	Met	Ser	Cys	Leu	Ala	Leu	Ser	Val	Leu	Leu	Leu	Ala	Gln	Leu	Thr
			20					25					30		
Gly	Ala	Ala	Lys	Asn	Phe	Glu	Asp	Val	Arg	Cys	Lys	Cys	Ile	Cys	Pro
		35					40					45			
Pro	Tyr	Lys	Glu	Asn	Pro	Gly	His	Ile	Tyr	Asn	Lys	Asn	Ile	Ser	Gln
	50					55				60					
Lys	Asp	Cys	Asp	Cys	Leu	His	Val	Val	Glu	Pro	Met	Pro	Val	Arg	Gly
65				70					75					80	
Pro	Asp	Val	Glu	Ala	Tyr	Cys	Leu	Arg	Cys	Glu	Cys	Lys	Tyr	Glu	Glu
				85				90					95		
Arg	Ser	Ser	Val	Thr	Ile	Lys	Val	Thr	Ile	Ile	Ile	Tyr	Leu	Ser	Ile
			100					105					110		
Leu	Gly	Leu	Leu	Leu	Leu	Tyr	Met	Val	Tyr	Leu	Thr	Leu	Val	Glu	Pro
		115					120				125				
Ile	Leu	Lys	Arg	Arg	Leu	Phe	Gly	His	Ser	Gln	Leu	Leu	Gln	Ser	Asp
	130					135				140					
Asp	Asp	Val	Gly	Asp	His	Gln	Pro	Phe	Ala	Asn	Ala	His	Asp	Val	Leu

145 150 155 160
 Ala Arg Ser Arg Ser Arg Ala Asn Val Leu Asn Lys Val Glu Tyr Ala
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 Gln Gln Arg Trp Lys Leu Gln Val Gln Glu Gln Arg Lys Ser Val Phe
 180 185 190
 Asp Arg His Val Val Leu Ser
 195

<210> 50
 <211> 227
 <212> PRT
 <213> Mouse

<400> 50
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 Gln Ala Leu Asn Thr Thr Val Leu Gln Gly Met Ala Gly Gln Ser Leu
 20 25 30
 Arg Val Ser Cys Thr Tyr Asp Ala Leu Lys His Trp Gly Arg Arg Lys
 35 40 45
 Ala Trp Cys Arg Gln Leu Gly Glu Glu Gly Pro Cys Gln Arg Val Val
 50 55 60
 Ser Thr His Gly Val Trp Leu Leu Ala Phe Leu Lys Lys Arg Asn Gly
 65 70 75 80
 Ser Thr Val Ile Ala Asp Asp Thr Leu Ala Gly Thr Val Thr Ile Thr
 85 90 95
 Leu Lys Asn Leu Gln Ala Gly Asp Ala Gly Leu Tyr Gln Cys Gln Ser
 100 105 110
 Leu Arg Gly Arg Glu Ala Glu Val Leu Gln Lys Val Leu Val Glu Val
 115 120 125
 Leu Glu Asp Pro Leu Asp Asp Gln Asp Ala Gly Asp Leu Trp Val Pro
 130 135 140
 Glu Glu Ser Ser Ser Phe Glu Gly Ala Gln Val Glu His Ser Thr Ser
 145 150 155 160
 Arg Asn Gln Glu Thr Ser Phe Pro Pro Thr Ser Ile Leu Leu Leu Leu
 165 170 175
 Ala Cys Val Leu Leu Ser Lys Phe Leu Ala Ala Ser Ile Leu Trp Ala
 180 185 190
 Val Ala Arg Gly Arg Gln Lys Pro Gly Thr Pro Val Val Arg Gly Leu
 195 200 205
 Asp Cys Gly Gln Asp Ala Gly His Gln Leu Gln Ile Leu Thr Gly Pro
 210 215 220
 Gly Gly Thr
 225

<210> 51
 <211> 503
 <212> PRT
 <213> Mouse

<400> 51
 Met Gly Thr Gly Ala Gly Gly Pro Ser Val Leu Ala Leu Leu Phe Ala
 1 5 10 15
 Val Cys Ala Pro Leu Arg Leu Gln Ala Glu Glu Leu Gly Asp Gly Cys
 20 25 30
 Gly His Ile Val Thr Ser Gln Asp Ser Gly Thr Met Thr Ser Lys Asn
 35 40 45

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Tyr	Pro	Gly	Thr	Tyr	Pro	Asn	Tyr	Thr	Val	Cys	Glu	Lys	Ile	Ile	Thr
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Val	Pro	Lys	Gly	Lys	Arg	Leu	Ile	Leu	Arg	Leu	Gly	Asp	Leu	Asn	Ile
65					70					75				80	
Glu	Ser	Lys	Thr	Cys	Ala	Ser	Asp	Tyr	Leu	Leu	Phe	Ser	Ser	Ala	Thr
				85					90					95	
Asp	Gln	Tyr	Gly	Pro	Tyr	Cys	Gly	Ser	Trp	Ala	Val	Pro	Lys	Glu	Leu
			100					105					110		
Arg	Leu	Asn	Ser	Asn	Glu	Val	Thr	Val	Leu	Phe	Lys	Ser	Gly	Ser	His
		115					120					125			
Ile	Ser	Gly	Arg	Gly	Phe	Leu	Leu	Thr	Tyr	Ala	Ser	Ser	Asp	His	Pro
	130					135					140				
Asp	Leu	Ile	Thr	Cys	Leu	Glu	Arg	Gly	Ser	His	Tyr	Phe	Glu	Glu	Lys
145					150					155					160
Tyr	Ser	Lys	Phe	Cys	Pro	Ala	Gly	Cys	Arg	Asp	Ile	Ala	Arg	Asp	Ile
				165					170					175	
Ser	Gly	Asn	Thr	Lys	Asp	Gly	Tyr	Arg	Asp	Thr	Ser	Leu	Leu	Cys	Lys
			180					185					190		
Ala	Ala	Ile	His	Ala	Gly	Ile	Ile	Thr	Asp	Glu	Leu	Gly	Gly	His	Ile
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Asn	Leu	Leu	Gln	Ser	Lys	Gly	Ile	Ser	His	Tyr	Glu	Gly	Leu	Leu	Ala
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Asn	Gly	Val	Leu	Ser	Arg	His	Gly	Ser	Leu	Ser	Glu	Lys	Arg	Phe	Leu
225					230					235					240
Phe	Thr	Thr	Pro	Gly	Met	Asn	Ile	Thr	Thr	Val	Ala	Ile	Pro	Ser	Val
				245					250					255	
Ile	Phe	Ile	Ala	Leu	Leu	Leu	Thr	Gly	Met	Gly	Ile	Phe	Ala	Ile	Cys
			260					265					270		
Arg	Lys	Arg	Lys	Lys	Lys	Gly	Asn	Pro	Tyr	Val	Ser	Ala	Asp	Ala	Gln
		275					280					285			
Lys	Thr	Gly	Cys	Trp	Lys	Gln	Ile	Lys	Tyr	Pro	Phe	Ala	Arg	His	Gln
	290					295					300				
Ser	Thr	Glu	Phe	Thr	Ile	Ser	Tyr	Asp	Asn	Glu	Lys	Glu	Met	Thr	Gln
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Lys	Leu	Asp	Leu	Ile	Thr	Ser	Asp	Met	Ala	Asp	Tyr	Gln	Gln	Pro	Leu
				325					330					335	
Met	Ile	Gly	Thr	Gly	Thr	Val	Ala	Arg	Lys	Gly	Ser	Thr	Phe	Arg	Pro
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Met	Asp	Thr	Asp	Thr	Glu	Glu	Val	Arg	Val	Asn	Thr	Glu	Ala	Ser	Gly
		355					360					365			
His	Tyr	Asp	Cys	Pro	His	Arg	Pro	Gly	Arg	His	Glu	Tyr	Ala	Leu	Pro
	370					375					380				
Leu	Thr	His	Ser	Glu	Pro	Glu	Tyr	Ala	Thr	Pro	Ile	Val	Glu	Arg	His
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Leu	Leu	Arg	Ala	His	Thr	Phe	Ser	Thr	Gln	Ser	Gly	Tyr	Arg	Val	Pro
				405					410					415	
Gly	Pro	Arg	Pro	Thr	His	Glu	His	Ser	His	Ser	Ser	Gly	Gly	Phe	Pro
			420					425					430		
Pro	Ala	Thr	Gly	Ala	Thr	Gln	Val	Glu	Ser	Tyr	Gln	Arg	Pro	Ala	Ser
		435					440					445			
Pro	Lys	Pro	Val	Gly	Gly	Gly	Tyr	Asp	Lys	Pro	Ala	Ala	Ser	Ser	Phe
	450					455					460				
Leu	Asp	Ser	Arg	Asp	Pro	Ala	Ser	Gln	Ser	Gln	Met	Thr	Ser	Gly	Gly
465					470					475					480
Asp	Asp	Gly	Tyr	Ser	Ala	Pro	Arg	Asn	Gly	Leu	Ala	Pro	Leu	Asn	Gln
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Thr	Ala	Met	Thr	Ala	Leu	Leu									

500

<210> 52
<211> 757
<212> PRT
<213> Mouse

<400> 52

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			20					25					30		
Leu	Arg	Leu	Val	Gly	Pro	Ala	Asp	Arg	Pro	Lys	Glu	Gly	Arg	Leu	Glu
		35					40					45			
Val	Leu	His	Gln	Gly	Gln	Trp	Gly	Thr	Val	Cys	Asp	Asp	Asp	Phe	Ala
	50					55					60				
Leu	Gln	Glu	Ala	Thr	Val	Ala	Cys	Arg	Gln	Leu	Gly	Phe	Glu	Ser	Ala
65					70					75					80
Leu	Thr	Trp	Ala	His	Ser	Ala	Lys	Tyr	Gly	Gln	Gly	Glu	Gly	Pro	Ile
				85					90					95	
Trp	Leu	Asp	Asn	Val	Arg	Cys	Leu	Gly	Thr	Glu	Lys	Thr	Leu	Asp	Gln
			100					105					110		
Cys	Gly	Ser	Asn	Gly	Trp	Gly	Ile	Ser	Asp	Cys	Arg	His	Ser	Glu	Asp
		115					120					125			
Val	Gly	Val	Val	Cys	His	Pro	Arg	Arg	Gln	His	Gly	Tyr	His	Ser	Glu
	130					135					140				
Lys	Val	Ser	Asn	Ala	Leu	Gly	Pro	Gln	Gly	Arg	Arg	Leu	Glu	Glu	Val
145					150					155					160
Arg	Leu	Lys	Pro	Ile	Leu	Ala	Ser	Ala	Lys	Arg	His	Ser	Pro	Val	Thr
				165					170					175	
Glu	Gly	Ala	Val	Glu	Val	Arg	Tyr	Asp	Gly	His	Trp	Arg	Gln	Val	Cys
			180					185					190		
Asp	Gln	Gly	Trp	Thr	Met	Asn	Asn	Ser	Arg	Val	Val	Cys	Gly	Met	Leu
		195					200					205			
Gly	Phe	Pro	Ser	Gln	Thr	Ser	Val	Asn	Ser	His	Tyr	Tyr	Arg	Lys	Val
	210					215					220				
Trp	Asn	Leu	Lys	Met	Lys	Asp	Pro	Lys	Ser	Arg	Leu	Asn	Ser	Leu	Thr
225					230					235					240
Lys	Lys	Asn	Ser	Phe	Trp	Ile	His	Arg	Val	Asp	Cys	Phe	Gly	Thr	Glu
				245					250					255	
Pro	His	Leu	Ala	Lys	Cys	Gln	Val	Gln	Val	Ala	Pro	Gly	Arg	Gly	Lys
			260					265					270		
Leu	Arg	Ala	Ala	Cys	Pro	Gly	Gly	Met	His	Ala	Val	Val	Ser	Cys	Val
		275					280					285			
Ala	Gly	Pro	His	Phe	Arg	Arg	Gln	Lys	Pro	Lys	Pro	Thr	Arg	Lys	Glu
	290					295					300				
Ser	His	Ala	Glu	Glu	Leu	Lys	Val	Arg	Leu	Arg	Ser	Gly	Ala	Gln	Val
305					310					315					320
Gly	Glu	Gly	Arg	Val	Glu	Val	Leu	Met	Asn	Arg	Gln	Trp	Gly	Thr	Val
			325						330					335	
Cys	Asp	His	Arg	Trp	Asn	Leu	Ile	Ser	Ala	Ser	Val	Val	Cys	Arg	Gln
			340					345					350		
Leu	Gly	Phe	Gly	Ser	Ala	Arg	Glu	Ala	Leu	Phe	Gly	Ala	Gln	Leu	Gly
		355					360					365			
Gln	Gly	Leu	Gly	Pro	Ile	His	Leu	Ser	Glu	Val	Arg	Cys	Arg	Gly	Tyr
	370					375					380				
Glu	Arg	Thr	Leu	Gly	Asp	Cys	Leu	Ala	Leu	Glu	Gly	Ser	Gln	Asn	Gly

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385						390						395						400
Cys	Gln	His	Ala	Asn	Asp	Ala	Ala	Val	Arg	Cys	Asn	Ile	Pro	Asp	Met			
				405					410					415				
Gly	Phe	Gln	Asn	Lys	Val	Arg	Leu	Ala	Gly	Gly	Arg	Asn	Ser	Glu	Glu			
				420					425					430				
Gly	Val	Val	Glu	Val	Gln	Val	Glu	Val	Asn	Gly	Val	Pro	Arg	Trp	Gly			
				435					440					445				
Thr	Val	Cys	Ser	Asp	His	Trp	Gly	Leu	Thr	Glu	Ala	Met	Val	Thr	Cys			
				450					455					460				
Arg	Gln	Leu	Gly	Leu	Gly	Phe	Ala	Asn	Phe	Ala	Leu	Lys	Asp	Thr	Trp			
465					470					475					480			
Tyr	Trp	Gln	Gly	Thr	Pro	Glu	Ala	Lys	Glu	Val	Val	Met	Ser	Gly	Val			
				485					490					495				
Arg	Cys	Ser	Gly	Thr	Glu	Met	Ala	Leu	Gln	Gln	Cys	Gln	Arg	His	Gly			
				500					505					510				
Pro	Val	His	Cys	Ser	His	Gly	Pro	Gly	Arg	Phe	Ser	Ala	Gly	Val	Ala			
				515					520					525				
Cys	Met	Asn	Ser	Ala	Pro	Asp	Leu	Val	Met	Asn	Ala	Gln	Leu	Val	Gln			
				530					535					540				
Glu	Thr	Ala	Tyr	Leu	Glu	Asp	Arg	Pro	Leu	Ser	Met	Leu	Tyr	Cys	Ala			
545					550					555					560			
His	Glu	Glu	Asn	Cys	Leu	Ser	Lys	Ser	Ala	Asp	His	Met	Asp	Trp	Pro			
				565					570					575				
Tyr	Gly	Tyr	Arg	Arg	Leu	Leu	Arg	Phe	Ser	Ser	Gln	Ile	Tyr	Asn	Leu			
				580					585					590				
Gly	Arg	Ala	Asp	Phe	Arg	Pro	Lys	Ala	Gly	Arg	His	Ser	Trp	Ile	Trp			
				595					600					605				
His	Gln	Cys	His	Arg	His	Tyr	His	Ser	Ile	Glu	Val	Phe	Thr	His	Tyr			
				610					615					620				
Asp	Leu	Leu	Thr	Leu	Asn	Gly	Ser	Lys	Val	Ala	Glu	Gly	His	Lys	Ala			
625					630					635					640			
Ser	Phe	Cys	Leu	Glu	Asp	Thr	Asn	Cys	Pro	Ser	Gly	Val	Gln	Arg	Arg			
				645					650					655				
Tyr	Ala	Cys	Ala	Asn	Phe	Gly	Glu	Gln	Gly	Val	Ala	Val	Gly	Cys	Trp			
				660					665					670				
Asp	Thr	Tyr	Arg	His	Asp	Ile	Asp	Cys	Gln	Trp	Val	Asp	Ile	Thr	Asp			
				675					680					685				
Val	Gly	Pro	Gly	Asp	Tyr	Ile	Phe	Gln	Val	Val	Val	Asn	Pro	Thr	Asn			
				690					695					700				
Asp	Val	Ala	Glu	Ser	Asp	Phe	Ser	Asn	Asn	Met	Ile	Arg	Cys	Arg	Cys			
705					710					715					720			
Lys	Tyr	Asp	Gly	Gln	Arg	Val	Trp	Leu	His	Asn	Cys	His	Thr	Gly	Asp			
				725					730					735				
Ser	Tyr	Arg	Ala	Asn	Ala	Glu	Leu	Ser	Leu	Glu	Gln	Glu	Gln	Arg	Leu			
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<210> 53
<211> 169
<212> PRT
<213> Mouse
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34

<213> Artificial Sequence

<220>

<223> Made in a lab

<400> 57

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18

<210> 58

<211> 3503

<212> DNA

<213> Mouse

<400> 58

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